ATTACHMENT D3

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U.S.A.

DIRECT MATERIAL SPECIFICATION

MAT'L. CODE:	
SUPERCEDES:	
APPLICABLE G.P.S.:	
DATE	
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DESCRIPTION: VISCOSITY OF ADHESIVES

I. Scope:

1) The following method covers the determination of the viscosity of free-flowing adhesives. This procedure is applicable to adhesives ranging from 50 - 200,000 cps. and is limited to materials that have or approach Newtonian flow characteristics.

2) For adhesives not exhibiting Newtonian or near Newtonian flow characteristics, the determination of the "Viscosity Index" should be considered because shear-rate dependant flow properties are detected and a shear-rate curve may be developed from the "Viscosity Index" data.

II. Apparatus:

1) Brookfield Viscometer Model RVU, RVF, RVT, MVO, MVF.

2) Series of spindles supplied with each instrument with various sized discs covering a standard range of viscosities. Scored, warped or damaged spindles shall not be used.

3) Thermometer: A precision thermometer with graduations not greater than 0.2°C divisions.

4) Water Bath: For sample conditioning if constant temperature room is not available.

III. Procedure:

1) Condition the adhesive sample at 25°C (or temperature specified by Vendor) at least 16 hrs. in a constant temperature water bath.

2) Select a spindle suitable to the viscosity range of the adhesive and firmly fit it into the shaft extension of the Brookfield.

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3) Slowly immerse the spindle into the adhesive to the depth indicated by the groove cut into the shaft. Press down the clutch lever and start the motor by snapping the toggle switch. Then release the lever and allow rotation to continue until the pointer has reached the position where it is stationary in relation to the rotating dial.

4) Again, press down the clutch lever and turn switch off. If the pointer is not in view when the dial rests, retart motor, keeping clutch lever pressed, allow to run until reading can be obtained.

5) Readings should be 20 - 80% of the scale if optimum results are to be obtained.

Calculation: Multiply the viscometer reading by spindle constant to yield results in centipoise.

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